STAT [redacted]

SEVENTH MONTHLY NARRATIVE REPORT

15 February 1965

REFERENCE

STAT [redacted]

REPORTING INTERVAL

10 January 1965 - 10 February 1965

OBJECTIVE

The objective of this program is the design, construction, and testing of a prenormalizing system to be used for problems of automatic target identification on aerial imagery. The prenormalizer will scan the image and, by special filtering techniques, produce a set of measurements which have minimal change with translation and rotation of the specific image on the scene. Testing is to be accomplished on the CONFLEX I Adaptive Pattern-Recognition System.

STATUS OF ACTIVITIES AND ACCOMPLISHMENTS

THE PRENORMALIZING SYSTEM

The Scanning System. During the past interval, the principal attention has been given to assembly of the scanning optics. The 51 individual gas lamps with which the slits are illuminated are being burned in for stability, and installation of the knife-edge stops is taking place. All parts for the

scanner have been fabricated, and the entire scanner effort is currently devoted to the final assembly. Major electronic subassemblies for the scanner have been assembled and wired and are ready for installation. The present estimate of completion of the scanner system, in view of projected shop loads, is the 22nd of February.

The Filter Bank. Approximately one-half of the 400 filters in the secondary filter bank have been trimmed to final bandpass characteristics. Interconnecting cables have been assembled, coupling the filter bank outputs to the electronic sensory field which interfaces with CONFLEX I.

Interface with CONFLEX I. The power and analog and digital signal wiring to the electronic sensory field is 90 percent complete. The summing amplifier and threshold circuitry providing D-cell outputs has been assembled and is ready for testing.

Readout Display. The wiring of the 420 lamp readout display is 60 percent complete. The input wiring from the analog signal connectors is complete and output wiring is ready to be tied in.

Summary. The status of the entire system is summed up by the approximate figures given below:

Design	- 99 percent complete
Fabrication	- 98 percent complete
Assembly	- 70 percent complete

EXPERIMENTAL PROGRAM

STAT [redacted]

STAT [redacted] to discuss a coordinated experimental program. At this time, a selection of target imagery was made to be supplied for the impending experimental program. Tentative plans for a program of experiments, which begin with simple simulated imagery and progress to the more subtle recognition problems, was outlined. A more detailed program will be prepared in the near future.

TIME SPENT ON PROJECT (CUMULATIVE TOTAL)

STAT [redacted] 146 Hours

380 Hours

TECHNICAL AGREEMENTS MADE

None

DIFFICULTIES ENCOUNTERED

None

PROGRAM FOR THE NEXT INTERVAL

During the next interval, the assembly of the system will be completed. Plans for debugging the system and execution of initial testing will be made. Schedules appear to permit the initial experimental work to begin in early March.

SUBMITTED BY [redacted] STAT

Project Engineer

Vice President, Engineering